each optionally substituted with 1 to 5 substituents independently selected at each occurrence from R^7, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, CN, $COOR^7$ $SO_2NR^8R^9$, and SO_2R^7;

B3

R^6 is H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, or (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl; and

R^7, R^8, R^9, R^{11}, and R^{12} are as defined in Claim 52.

REMARKS

Marked-up copies of claims 16, 17 and 52 are attached as an Appendix

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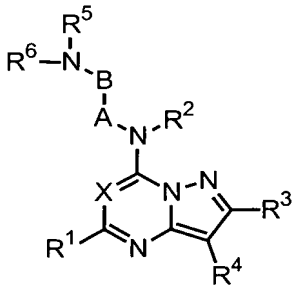
APPENDIX

16 (Amended) A method of inhibiting the binding of NPY to the NPY1 receptor, which method comprises contacting, in the presence of NPY, a solution comprisng a compound of ~~[Claim 1]~~ the formula:



or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein:

X is N or CR^{14};

R^1 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, C_1-C_6 alkyl-NR^8R^9;

R^2 is H,

C_1-C_6 alkyl which optionally forms a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoheterocycle with A or B, each of which is optionally substituted with R^7,

C_3-C_{10} cycloalkyl, or

(C_3-C_{10} cycloalkyl) C_1-C_6 alkyl; or

R^2 and R^6 jointly with the 2 nitrogen atoms to which they are bound, form a C_2-C_5 aminoheterocycle optionally substituted with R^7, or

R^2 and A jointly form a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoe heterocycle optionally substituted at with R^7;

A represents an alkyl chain of 1,2, or 3 carbon atoms which is optionally mono- or di-substituted at

each carbon with substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, and C_1-C_6 alkyl-NR^8R^9, or

A and B jointly form a C_3-C_6 carbocycle, optionally substituted at each atom with R^7;

B represents an alkyl chain of 1,2 or 3 carbons atoms, which is optionally mono- or di-substituted at each carbon with substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, and C_1-C_6 alkyl-NR^8R^9, or

B and R^2 jointly form a C_3-C_6 aminocarbocycle , which is optionally substituted at each atom with R^7, or

B and R^6 jointly form a C_3-C_6 aminocarbocycle, which is optionally substituted at each atom with R^7;

R^3 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7, C_1-C_6 cyanoalkyl, NR^8R^9, C_1-C_6 alkyl-NR^8R^9;

R^4 is selected from aryl or heteroaryl, each of which is substituted with 1 to 5 substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 alkynyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, C_1-C_6 alkyl-OR^7, NR^8R^9, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, C_1-C_6 alkyl-$CONR^8R^9$, $COOR^7$, C_1-C_6 alkyl-$COOR^7$, CN, C_1-C_6 alkyl-CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein at least one of the positions ortho or para to the point of attachment of the aryl or heteroaryl ring to the pyrazole is substituted;

R^5 is selected from:

C_1-C_6 alkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, each of which is substituted with 1 to 5 groups independently selected at each occurrence from halo, C_1-C_2 haloalkyl, oxo, OR^7, cyano, NR^8R^9, $CONR^8R^9$, $COOR^7$, $SO_2NR^8R^9$, SO_2R^7, $NR^{11}COR^{12}$, $NR^{11}SO_2R^7$;

Aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl, aryl(C_5-C_8)cycloalkyl, or heteroaryl(C_5-C_8)cycloalkyl, each of which is optionally substituted with 1 to 5 substituents independently selected at each occurrence from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein any 2 adjacent substituents may be take together to form a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

C_3-C_{10} cycloalkyl or C_2-C_9 heterocycloalkyl containing one, two, or three O, S, or N atoms, each of which is optionally substituted with 1 to 6 substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, oxo, halogen, C_1-C_6 haloalkyl, OR^7, NR^8R^9, (with the proviso that when two OR^7 or NR^8R^9 substituents are geminally located on the same carbon R^7 is not H and the geminally located OR^7 or NR^8R^9 substitutuents can be taken together to form a C_2-C_4 ketal, oxazoline, oxazolidine, imidazoline, or imidazolidine heterocycle), C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, oxo, hydroximino, C_1-C_6 alkoximino, $SO_2NR^8R^9$, SO_2R^7, heterocycloalkyl, aryl, heteroaryl, where aryl or heteroaryl is optionally substituted with 1 to 5 substituents independently selected at each occurrence from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), with the proviso that 2 adjacent substituents can optionally form together a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

aryl or heteroaryl, optionally substituted with 1 to 5 substituents independently selected at each occurrence from halogen, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein any 2 adjacent substituents may be taken together to form a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

or

3- or 4-piperidinyl, 3-pyrrolidinyl, 3- or 4- tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-

tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydrothiopyranyl, 3- or 4-(1,1-dioxo) tetrahydrothiopyranyl, 1-azabicyclo[4.4.0]decyl, 8-azabicyclo[3.2.1]octanyl, norbornyl, quinuclidinyl, indolin-2-one-3-yl, 2-(methoximino)-perhydroazepin-6-yl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from R^7, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, CN, $COOR^7$ $SO_2NR^8R^9$, and SO_2R^7;

R^6 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_4 alkenyl, aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl each of which is optionally substituted with 1 to 5 substituents independently from halogen, C_1-C_6 haloalkyl, OR^{13}, NR^8R^9, C_1-C_6 alkyl-OR^{13}, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, and SO_2R^7;

R^7 is independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_3 haloalkyl, or heterocycloalkyl, C_1-C_8 alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl each optionally substituted with 1 to 5 substituents independently selected from halogen, C_1-C_6 haloalkyl, OR^{13}, NR^8R^9, C_1-C_6 alkyl-OR^{13}, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^{13}$, CN, $SO_2NR^8R^9$, and SO_2R^{13}, with the proviso that when R^7 is SO_2R^{13}, R^{13} cannot be H

R^8 and R^9 are independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_2-C_6 alkenyl, C_3-C_{10} cycloalkenyl, C_2-C_6 alkynyl, heterocycloalkyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl, or R^8 and R^9, taken together, can form a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoheterocycle each of which is optionally substituted with C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_3 haloalkyl,
or heterocycloalkyl, C_1-C_8 alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl;

R^{11} is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl;

R^{12} is selected from H, aryl, heteroaryl, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6

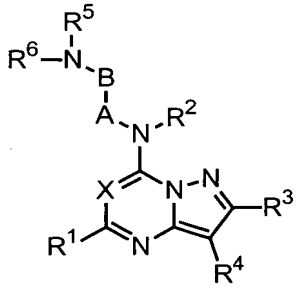
alkyl, optionally substituted with OR^7, NR^8R^9, C_3-C_6 aminocarbocycle, or C_2-C_5 aminoheterocycle;

R^{13} is independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 haloalkyl, with the proviso that when R^7 is SO_2R^{13}, R^{13} cannot be H; and

R^{14} is H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_4 alkenyl, C_2-C_4 alkynyl, halo, or CN

with cells expressing the NPY1 receptor, wherein the compound is present in the solution at a concentration sufficient to reduce levels of NPY binding to cells expressing the NPY1 receptor in vitro.

17. (Amended) A method for altering the signal-transducing activity of a cell surface NPY1 receptor, said method comprising contacting cells expressing such a receptor with a solution comprising a compound of ~~[Claim 1]~~ the formula



or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein:

X is N or CR^{14};

R^1 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, C_1-C_6 alkyl-NR^8R^9;

R^2 is H,

C_1-C_6 alkyl which optionally forms a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoheterocycle with A or B, each of which is optionally substituted with R^7,

C_3-C_{10} cycloalkyl, or

(C_3-C_{10} cycloalkyl) C_1-C_6 alkyl; or

R^2 and R^6 jointly with the 2 nitrogen atoms to which they are bound, form a C_2-C_5 aminoheterocycle optionally substituted with R^7, or

R^2 and A jointly form a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoe heterocycle optionally substituted at with R^7;

A represents an alkyl chain of 1,2, or 3 carbon atoms which is optionally mono- or di-substituted at each carbon with substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl,

OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, and C_1-C_6 alkyl-NR^8R^9, or

A and B jointly form a C_3-C_6 carbocycle, optionally substituted at each atom with R^7;

B represents an alkyl chain of 1,2 or 3 carbons atoms, which is optionally mono- or di-substituted at each carbon with substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, and C_1-C_6 alkyl-NR^8R^9, or

B and R^2 jointly form a C_3-C_6 aminocarbocycle , which is optionally substituted at each atom with R^7, or

B and R^6 jointly form a C_3-C_6 aminocarbocycle, which is optionally substituted at each atom with R^7;

R^3 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7, C_1-C_6 cyanoalkyl, NR^8R^9, C_1-C_6 alkyl-NR^8R^9;

R^4 is selected from aryl or heteroaryl, each of which is substituted with 1 to 5 substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 alkynyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, C_1-C_6 alkyl-OR^7, NR^8R^9, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, C_1-C_6 alkyl-$CONR^8R^9$, $COOR^7$, C_1-C_6 alkyl-$COOR^7$, CN, C_1-C_6 alkyl-CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein at least one of the positions ortho or para to the point of attachment of the aryl or heteroaryl ring to the pyrazole is substituted;

R^5 is selected from:

C_1-C_6 alkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, each of which is substituted with 1 to 5 groups independently selected at each occurrence from halo, C_1-C_2 haloalkyl, oxo, OR^7, cyano, NR^8R^9, $CONR^8R^9$, $COOR^7$, $SO_2NR^8R^9$, SO_2R^7, $NR^{11}COR^{12}$, $NR^{11}SO_2R^7$;

Aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl, aryl(C_5-C_8)cycloalkyl, or heteroaryl(C_5-C_8)cycloalkyl, each of which is optionally substituted with 1 to 5 substituents independently selected at each

occurrence from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein any 2 adjacent substituents may be take together to form a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

C_3-C_{10} cycloalkyl or C_2-C_9 heterocycloalkyl containing one, two, or three O, S, or N atoms, each of which is optionally substituted with 1 to 6 substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, oxo, halogen, C_1-C_6 haloalkyl, OR^7, NR^8R^9, (with the proviso that when two OR^7 or NR^8R^9 substituents are geminally located on the same carbon R^7 is not H and the geminally located OR^7 or NR^8R^9 substitutuents can be taken together to form a C_2-C_4 ketal, oxazoline, oxazolidine, imidazoline, or imidazolidine heterocycle), C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, oxo, hydroximino, C_1-C_6 alkoximino, $SO_2NR^8R^9$, SO_2R^7, heterocycloalkyl, aryl, heteroaryl, where aryl or heteroaryl is optionally substituted with 1 to 5 substituents independently selected at each occurrence from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), with the proviso that 2 adjacent substituents can optionally form together a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

aryl or heteroaryl, optionally substituted with 1 to 5 substituents independently selected at each occurrence from halogen, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein any 2 adjacent substituents may be taken together to form a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

or

3- or 4-piperidinyl, 3-pyrrolidinyl, 3- or 4- tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydrothiopyranyl, 3- or 4-(1,1-dioxo) tetrahydrothiopyranyl, 1-azabicyclo[4.4.0]decyl, 8-azabicyclo[3.2.1]octanyl, norbornyl,

quinuclidinyl, indolin-2-one-3-yl, 2-(methoximino)-perhydroazepin-6-yl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from R^7, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, CN, $COOR^7$ $SO_2NR^8R^9$, and SO_2R^7;

R^6 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_4 alkenyl, aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl each of which is optionally substituted with 1 to 5 substituents independently from halogen, C_1-C_6 haloalkyl, OR^{13}, NR^8R^9, C_1-C_6 alkyl-OR^{13}; C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, and SO_2R^7;

R^7 is independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_3 haloalkyl, or heterocycloalkyl, C_1-C_8 alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl each optionally substituted with 1 to 5 substituents independently selected from halogen, C_1-C_6 haloalkyl, OR^{13}, NR^8R^9, C_1-C_6 alkyl-OR^{13}, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^{13}$, CN, $SO_2NR^8R^9$, and SO_2R^{13}, with the proviso that when R^7 is SO_2R^{13}, R^{13} cannot be H

R^8 and R^9 are independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_2-C_6 alkenyl, C_3-C_{10} cycloalkenyl, C_2-C_6 alkynyl, heterocycloalkyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl, or R^8 and R^9, taken together, can form a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoheterocycle each of which is optionally substituted with C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_3 haloalkyl,
or heterocycloalkyl, C_1-C_8 alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl;

R^{11} is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl;

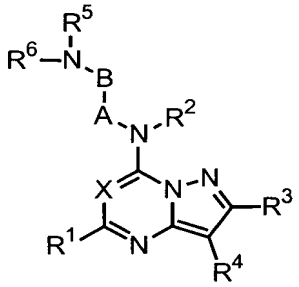
R^{12} is selected from H, aryl, heteroaryl, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, optionally substituted with OR^7, NR^8R^9, C_3-C_6 aminocarbocycle, or C_2-C_5 aminoheterocycle;

R^{13} is independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 haloalkyl, with the proviso that when R^7 is SO_2R^{13}, R^{13} cannot be H; and

R^{14} is H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_4 alkenyl, C_2-C_4 alkynyl, halo, or CN

wherein the compound is present in the solution at a concentration sufficient to reduce levels of NPY binding to cells expressing the NPY1 receptor in vitro.

52 (Amended) A method of selectively inhibiting binding of NPY, receptors, which comprises contacting a compound of [Claim 1] the formula:



or a pharmaceutically acceptable salt, hydrate, or prodrug thereof, wherein:

X is N or CR^{14};

R^1 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, C_1-C_6 alkyl-NR^8R^9;

R^2 is H,

C_1-C_6 alkyl which optionally forms a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoheterocycle with A or B, each of which is optionally substituted with R^7,

C_3-C_{10} cycloalkyl, or

(C_3-C_{10} cycloalkyl) C_1-C_6 alkyl; or

R^2 and R^6 jointly with the 2 nitrogen atoms to which they are bound, form a C_2-C_5 aminoheterocycle optionally substituted with R^7, or

R^2 and A jointly form a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoe heterocycle optionally substituted at with R^7;

A represents an alkyl chain of 1,2, or 3 carbon atoms which is optionally mono- or di-substituted at each carbon with substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, and C_1-C_6 alkyl-NR^8R^9, or

A and B jointly form a C_3-C_6 carbocycle, optionally substituted at each atom with R^7;

B represents an alkyl chain of 1,2 or 3 carbons atoms, which is optionally mono- or di-substituted at each carbon with substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7; C_1-C_6 cyanoalkyl, NR^8R^9, and C_1-C_6 alkyl-NR^8R^9, or

B and R^2 jointly form a C_3-C_6 aminocarbocycle , which is optionally substituted at each atom with R^7, or

B and R^6 jointly form a C_3-C_6 aminocarbocycle, which is optionally substituted at each atom with R^7;

R^3 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, cyano, halo, C_1-C_6 haloalkyl, OR^7, C_1-C_6 alkyl-OR^7, C_1-C_6 cyanoalkyl, NR^8R^9, C_1-C_6 alkyl-NR^8R^9;

R^4 is selected from aryl or heteroaryl, each of which is substituted with 1 to 5 substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, C_1-C_6 alkynyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, C_1-C_6 alkyl-OR^7, NR^8R^9, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, C_1-C_6

alkyl-$CONR^8R^9$, $COOR^7$, C_1-C_6 alkyl-$COOR^7$, CN, C_1-C_6 alkyl-CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein at least one of the positions ortho or para to the point of attachment of the aryl or heteroaryl ring to the pyrazole is substituted;

R^5 is selected from:

C_1-C_6 alkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, each of which is substituted with 1 to 5 groups independently selected at each occurrence from halo, C_1-C_2 haloalkyl, oxo, OR^7, cyano, NR^8R^9, $CONR^8R^9$, $COOR^7$, $SO_2NR^8R^9$, SO_2R^7, $NR^{11}COR^{12}$, $NR^{11}SO_2R^7$;

Aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl, aryl(C_5-C_8)cycloalkyl, or heteroaryl(C_5-C_8)cycloalkyl, each of which is optionally substituted with 1 to 5 substituents independently selected at each occurrence from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein any 2 adjacent substituents may be take together to form a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

C_3-C_{10} cycloalkyl or C_2-C_9 heterocycloalkyl containing one, two, or three O, S, or N atoms, each of which is optionally substituted with 1 to 6 substituents independently selected from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, oxo, halogen, C_1-C_6 haloalkyl, OR^7, NR^8R^9, (with the proviso that when two OR^7 or NR^8R^9 substituents are geminally located on the same carbon R^7 is not H and the geminally located OR^7 or NR^8R^9 substitutuents can be taken together to form a C_2-C_4 ketal, oxazoline, oxazolidine, imidazoline, or imidazolidine heterocycle), C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, oxo, hydroximino, C_1-C_6 alkoximino, $SO_2NR^8R^9$, SO_2R^7, heterocycloalkyl, aryl, heteroaryl, where aryl or heteroaryl is optionally substituted with 1 to 5 substituents independently selected at each occurrence from C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-

oxo-1,3-oxazolidinyl), with the proviso that 2 adjacent substituents can optionally form together a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

aryl or heteroaryl, optionally substituted with 1 to 5 substituents independently selected at each occurrence from halogen, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_6 alkenyl, halogen, C_1-C_6 haloalkyl, trifluromethylsulfonyl, OR^7, NR^8R^9, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, SO_2R^7, aryl, heteroaryl, heterocycloalkyl, 3-, 4-, or 5-(2-oxo-1,3-oxazolidinyl), wherein any 2 adjacent substituents may be taken together to form a C_3-C_{10} cycloalkyl ring, a C_3-C_{10} cycloalkenyl ring or a heterocycloalkyl ring;

or

3- or 4-piperidinyl, 3-pyrrolidinyl, 3- or 4- tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydropyranyl, 3-tetrahydrofuranyl, 3- or 4-tetrahydrothiopyranyl, 3- or 4-(1,1-dioxo) tetrahydrothiopyranyl, 1-azabicyclo[4.4.0]decyl, 8-azabicyclo[3.2.1]octanyl, norbornyl, quinuclidinyl, indolin-2-one-3-yl, 2-(methoximino)-perhydroazepin-6-yl, each optionally substituted with 1 to 5 substituents independently selected at each occurrence from R^7, C_1-C_6 alkyl-OR^7, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, CN, $COOR^7$ $SO_2NR^8R^9$, and SO_2R^7;

R^6 is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_4 alkenyl, aryl(C_1-C_6)alkyl, heteroaryl(C_1-C_6)alkyl each of which is optionally substituted with 1 to 5 substituents independently from halogen, C_1-C_6 haloalkyl, OR^{13}, NR^8R^9, C_1-C_6 alkyl-OR^{13}, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^7$, CN, $SO_2NR^8R^9$, and SO_2R^7;

R^7 is independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_3 haloalkyl, or heterocycloalkyl, C_1-C_8 alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl each optionally substituted with 1 to 5 substituents independently selected from halogen, C_1-C_6 haloalkyl, OR^{13}, NR^8R^9, C_1-C_6 alkyl-OR^{13}, C_1-C_6 alkyl-NR^8R^9, $CONR^8R^9$, $COOR^{13}$, CN, $SO_2NR^8R^9$, and SO_2R^{13}, with the proviso that when R^7 is SO_2R^{13}, R^{13} cannot be H

R^8 and R^9 are independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_2-

C_6 alkenyl, C_3-C_{10} cycloalkenyl, C_2-C_6 alkynyl, heterocycloalkyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl, or R^8 and R^9, taken together, can form a C_3-C_6 aminocarbocycle or a C_2-C_5 aminoheterocycle each of which is optionally substituted with C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, C_3-C_{10} cycloalkenyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_1-C_3 haloalkyl,

or heterocycloalkyl, C_1-C_8 alkylsulfonyl, arylsulfonyl, heteroarylsulfonyl, C_1-C_8 alkanoyl, aroyl, heteroaroyl, aryl, heteroaryl, C_1-C_6 arylalkyl or C_1-C_6 heteroarylalkyl;

R^{11} is selected from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl;

R^{12} is selected from H, aryl, heteroaryl, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, optionally substituted with OR^7, NR^8R^9, C_3-C_6 aminocarbocycle, or C_2-C_5 aminoheterocycle;

R^{13} is independently selected at each occurrence from H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_6 alkenyl, C_2-C_6 alkynyl, C_1-C_6 haloalkyl, with the proviso that when R^7 is SO_2R^{13}, R^{13} cannot be H; and

R^{14} is H, C_1-C_6 alkyl, C_3-C_{10} cycloalkyl, (C_3-C_{10} cycloalkyl) C_1-C_6 alkyl, C_2-C_4 alkenyl, C_2-C_4 alkynyl, halo, or CN

with neuronal cells, wherein the compound is present in an amount effective to produce a concentration sufficient to selectively inhibit bindingof NPY peptides to NPY_1 receptors in vitro.